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PREDICTION AND CONTROL OF SUICIDE RISK IN A PRISON  
POPULATION

*City University of New York*

PH.D. 1981

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PREDICTION AND CONTROL OF SUICIDE RISK

IN A PRISON POPULATION

by

ARNETT W. GASTON

A dissertation submitted to the Graduate Faculty  
in Clinical Psychology in partial fulfillment of  
the requirements for the degree of Doctor of  
Philosophy, the City University of New York

1981

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This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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ABSTRACT

PREDICTION AND CONTROL OF SUICIDE RISK  
IN A PRISON POPULATION

by

Arnett W. Gaston

Advisor: Professor Louis J. Gerstman

The case histories of 54 male prison suicides over an eight year period were contrasted with 500 nonsuicidal controls to determine any demographic or behavioral factors that might distinguish the two groups. Four factors were found to occur significantly more often in the suicidal groups: addiction, depression, poor reality testing and poor impulse control. In addition the suicides tended to be older than the controls, and were more likely to have made their attempts by night than by day.

This information was communicated to custodial personnel in an effort to foster selective patterns of vigilance over prisoners at risk. The result was that over the following four years 259 suicide attempts were reported, of which 31 were successful. The 88% rescue rate was found to be potentially inflated since many reports lacked genuine harmful intent.

Accordingly, all unsuccessful attempts were assessed for lethal risk, thereby defining a high risk group (N = 104), a low risk group (N = 106), and an equivocal group (N = 18).

In terms of the four factors identified previously, members of the high risk group were found to be indistinguishable from the successful suicides in average risk, while both groups had higher risk scores than the low risk and equivocal groups. When the four groups were converged into two, it was found that the high risks and successfuls were older than the low risks and equivocals and likewise were more prone to make their attempts by night, just as was the case for the original group of suicides.

It was concluded that the identification of risk factors had fostered suicide prevention. The percentage of actual suicides represented only 23% of serious attempts, while the risk factors themselves were deemed similar to those at work in the general population.

## ACKNOWLEDGEMENTS

To my family for their faith, encouragement and patience. For helping me to keep my faith in myself so that even the deepest discouragement proved more of an inconvenience than an impediment, and for sharing with me the labor, frustration and the ultimate satisfaction of achieving this goal.

To Ben Malcolm, mentor and dearest friend. For the sacrifices he has made on my behalf and for the giving of his time, talent and wisdom over the years; and whose friendship I value even more than what he has helped me to achieve.

To Lou Gerstman, benefactor and friend. For so freely giving of his time, advice and concern. For working so hard and tirelessly on my behalf and for having the keen insight to understand and bring order and resolution to the chaos this part of my life had become.

To Hal Wilensky and Larry Gould for helping me to survive and for the guidance I needed in the early years. And, finally, to A.J. Franklin, who helped make this a happy ending.

None of this would have been possible if not for all of them.

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CHAPTER I  
INTRODUCTION

Suicide has been the leading cause of death in the New York City jails for 12 of the past 17 years. The act has been of major concern to the prison managers as well as to the social scientist engaged in the study of behavior during incarceration. The suicide presents a major problem to the jail administrator whose charter responsibility it is to maintain care, custody and control of the individual committed to his jurisdiction. Social scientists are often frustrated in their attempts to study the jail suicide, for most of the conventional tools such as psychodiagnostic testing and predictive scales applicable to the free society have proven unsuited for or inadequate to the task.

Numerous attempts have been made to understand the nature of suicidal behavior in jail and parenthetically, to determine the most viable method of control (Danto, 1971, 1972 and 1973; Allen, 1969, Beigel et al., 1972; Johnson, 1969). The major research question is: "What are the characteristics of the inmates who commit suicide in jail?" Beyond psychological indices are there also demographic indicators that can contribute to the swift and accurate assessment of suicide potential? And, given those factors idiosyncratic to jails, can it be assessed where, when and how the act may be attempted? Along with characterological

factors, particularly inwardly directed aggression, are there certain logistic and demographic data which would be useful and necessary to the establishment of a suicide profile?

These questions are critical due to the fact that the New York City Department of Corrections, like most jails and prisons throughout the country, are overcrowded with inmates and do not have the appropriate staff levels to adequately address the population for which they are responsible. What happens is many suicidal people simply are not diagnosed in time, and kill themselves before detection and intervention can be accomplished. Adding to the problem was the fact that there was a relative absence of research on the detainee in the New York City Department of Correction, where the suicide rate in the detention setting was greater than that of any prison or the free population. By way of definition, a detainee is an individual who is incarcerated in jail in the process of or awaiting trial. They are technically innocent.

### Theory

Most prevalent theory on suicide can at best be considered only partially applicable to the jail suicide. Those dynamics associated with the suicide in the free society are not applicable to the jail suicide, and conversely, there are factors at play in the jail suicide not in evidence in the free society. Therefore, only those theories that relate

to the jail suicide will be presented. They deal primarily with the ecological and learning theory models.

Durkheim (1897, 1951), derived his formulation of the ecological model of suicide from his conceptualizations of society as a matrix of forces. Suicide depended on the outcome of these interrelated social forces, and the strength of the suicidal tendency existing in the society varied inversely with the degree of cohesion within that society, Durkheim postulated that the dynamics that precipitated the suicidal event were focused on the failure to adapt to the particular ecological niche one occupied. This maladaptation could occur because of excessive acceptance or rejection of this role by the individual. Durkheim outlined three types of suicide based on the maladaptive role process:

- (1) Altruistic suicide, where the attachment by the individual is too close and the individual sacrifices, or martyrs himself for the sociocultural code;
- (2) Egoistic suicide, where one kills himself because of rejection by the group, or the victim's inability to integrate into the social milieu with which he strongly identifies or desires to have an affiliation;
- and (3) Anomic suicide, which results from self-isolation from the society and its proscriptions.

Durkheim's type most likely to, but not precisely fit the jail suicide would be the egoistic suicide, possible because of the jail enhancing his ability to integrate into the milieu with which he strongly identifies. It is the variable

of egoism, as espoused by Durkheim that will theoretically be examined, the rationale being that the jail situation is such that an individual is forced to dissociate himself from the milieu with which he strongly identifies (family, friends, significant others), and because incarceration is viewed by many inmates as a form of rejection by society, which could impact one's feelings of oneself.

In contrast to Durkheim's idea of the causative factor of ecological stresses and strains as the major precipitant of suicide was the position of Henry and Short (1954), who proposed that suicide rates were higher when external restraints were weak and the individual had to bear the burden of responsibility for the frustration he encountered. Where the external restraints were great, homicide rather than suicide was the more prevalent reaction to frustration. One cannot assume the walls and bars of a jail or prison provide great external constraints. For the most part, they merely restrain the incarcerated individual's access to the free community. The real external restraints, placed on the individual in the captive society by its subcultures are weak, due to the alienation and different value systems established because of the lack of communication between these subcultures in the jail. This places the individual in a position where he must bear the burden of responsibility for the frustration he encounters. There are those in the free society and the captive society who cannot bear such burdens, which could lead

to irrational forms of attempting to alleviate this burden. This is a variable that may have significant impact on an individual so disposed who enters a jail, and as such, should be examined.

Lindemann, as reported by Gordon, et al. (1950), proposed that hypereridism, a morbid state of hostile aggression, existed in some individuals who, in response to repeated environmental stress and provocation from the ecological niche, turned their aggression inward. Rotter (1969) believed a particular behavioral characteristic that developed as the individual matured was the perception of reward or reinforcement in life either being predicated on one's own behavior (internal, or centralized locus of control), or that his personal actions had nothing to do with it (external, or decentralized). This hypothesis was similar to that of Henry and Short (1954). An internal locus of control characterizes the individual who feels he is in control of his destiny, and that what he does can control or influence the environment. If the locus of control is external, the individual regards himself as powerless and at the mercy of fate. Applying Henry and Short's hypothesis (1954) to the incarcerated individual, an example of an inmate who would have an internalized locus of control would be the inmate whose criminal activity necessitated physical incapacitation of the victim, e.g., assault with robbery, homicide, rape, etc. An example of an inmate who would have an external locus

of control would be the inmate whose criminal activity necessitated nonconfronting activity, such as a burglar (one who robs a house if he is reasonably certain no one is there), embezzler, auto thief, etc. Rotter (1969) has stated a serious problem exists when the perception of the locus of control shifts, and the possibility of an ensuing inability to deal with the perceived shift (internal to external, or the opposite). While Rotter's hypothesis [supra] can be applied to the prisoner, it must be made clear that Rotter is referring to what the individual's perception of the locus of control is, even though it may differ from reality. When the perception clashes with reality, problems can be anticipated, e.g., when the person, although locked up and under a different authority still perceives himself as being in control he may continue to act as he did on the outside. An example of this is the individual known in jail as the "gorilla," or "barn boss" who physically intimidates people for sexual favors or to steal what they have or to simply exert control. The activity will include physical incapacitation of his victims, just as in the free society. Given this, the person with an internal locus of control could conceivably have a greater propensity toward inward aggression because of his inability to aggress outward. Internal and external loci of control may be of notable consequence to one's actions, particularly the role either may play in suicidal activity.

The learning theory model (Resnick, et al., 1972; Frederick and Resnick, 1971; Bryan, 1969) could account for some inwardly aggressive people committing suicide in jail. The learning theory model holds that an individual may learn to adopt suicidal behavior much in the same way that one learns coping or other adaptational behavior. It is because this inwardly aggressive individual cannot learn to model his behavior after that of the outwardly aggressive group with which he desires affiliation that he patterns his actions (or reactions to adaptational inability) after suicidal behavior in order to escape a situation with which he cannot cope. A logical extension then, would be to examine if suicidal activity might be learned in the jail setting.

From the epidemiological data available, we know that no suicide theory is in itself able to account for all suicides. The relative contributions of each of the component theories will be evaluated in relation to the findings. Basically, it has been illustrated how the two characteristics of suicides (inwardly and outwardly aggressive people) lend some support to the theories mentioned. This theme is further developed in the author's theory of reactive depression and inward aggression.

#### Theory of Reactive Depression and Inward Aggression

One approach to classification of those who commit suicide in jail entailed two general categories, aggressors

and nonaggressors. Aggressors were those who demonstrated a centralized locus of control and felt they were, or must be in control of their fate. They were those who committed aggressive acts towards others, as explained earlier. Non-aggressors manifested a decentralized locus of control and felt they were not in control of their fate and must provide a means of avoiding confrontation or escaping. They did not commit aggressive acts toward others because this involved confrontation and little chance of escaping a situation (also earlier illustrated). This is not to say that non-aggressors do not possess the potential for committing acts of aggression, it is to suggest that the characterological morphology, whatever its origins, of these individuals does not lend itself to this type of activity by choice.

The first factor under consideration was a symptom that has long been associated with suicide--depression. Although the association between depression and suicide has been well-documented to some extent for all types of suicide (Mayer, 1971; Mayfield and Montgomery, 1972; Cooper, 1974; Atwood, 1972; Lyons, 1972; Cline 1973; Fawcett, 1974; Lester and Beck, 1975; Korella, 1972), the available data on jail suicides did not reveal symptoms or histories of endogenous depression. This would suggest that depression in this instance was not the cause or precipitant of the set of circumstances leading to the attempt to take one's life (as might be the case in endogenous depression), but

rather the sum effect of being in jail (or the reason for being in jail) and how this situation was perceived that might act as a suicide potentiality-reality catalytic agent. This means simply that the depressive state noted could be directly occasioned by some external situation or circumstance resulting from having committed an act rather than these feelings emanating as a result of the act itself. This deals with the area involving guilt and shame, which will have to be recognized in each situation. Although guilt and shame seem to have some relationship to each other, they are non-synonymous in context. Guilt is internal. It is the realization that one had done wrong (Hinsie and Campbell, 1974). This realization needs no reaction to an inner feeling which is aroused when someone does something he considers wrong (Friedman, et al., 1970). In this instance, it is a fear of one's own feelings; the sanction may be moral or personal rather than social or peer-induced. As Freud stated (1926b) guilt is moral anxiety, a fear of conscience. Shame on the other hand is external. It is the result of a forceful nonrecognition where the individual is in some meaningful way cut off from or ostracized by the significant group as a result of his action (Kardiner, 1939). The person would not feel bad about committing the act if no one would find out about it. The ostracism resulting from knowledge of the act is a form of nonrecognition in that the individual is no longer recognized by the significant

group as he once might have been prior to his actions becoming public. It is a fear of the feelings of others rather than of one's own feelings. Shame is, as Hinsie and Campbell (1974) have stated, "A defense against exhibitionism and voyeurism; 'I feel ashamed' means, 'I don't want to be seen.'" A child molester, one of the many inmates interviewed by the author summed it up in a perhaps less sophisticated but more succinct manner. "I never felt bad about what I did until other people found out I had done it. Now they think I'm some kind of freak; I can't even look them in the face." A conclusion reached by the author as a result of numerous interviews and empirical observation over a 21 year professional affiliation with jails is that the great majority of offenders do not feel bad about committing their acts, they feel bad about getting caught committing their acts.

Whether it be guilt or shame, one component in the structure of either is anger. The anger felt by the affected individual may be directed at those circumstances, persons or institutions perceived by the individual as responsible for placing him in jail (which does not apply to the theoretical model, for this would mean a display of outward aggression by attempting to attack the system with no conscious or unconscious intent of self-harm), or they may be directed toward oneself (inward). This is consistent with Mayer's hypothesis (1971) that two factors, anger and despair, are always present in every suicide and suicide

gesture. although the final result of the extreme display of anger, resulting from depression is the same, the precipitant intrinsic factors, as they relate to the aggressor and nonaggressor, are different.

The aggressor perceives rewards or punishments in life being predicated on one's own behavior. An internal locus of control characterizes this individual (Rotter, 1966). This particular person feels he is in control of his fate. His life style and its ensuing actions are a form of expression of the desire to control. The act embodies a decisive exercise which enhances wish fulfillment. The aggressor is imposing his will on another and his advantageous role in the "conqueror-vanquished" situation is one of his choosing. It is not necessary to go into the sociological aspect of circumstances which might direct him toward or predispose him to antisocial behavior. What is being dealt with here is the method of choice. There is no guilt or shame regarding his choice of behavior and no concomitant depressive state. If there is any depression it is either due to his perception of being in a set of circumstances that make him feel the need to alleviate his situation through his activity of choice, or once engaged in the activity, it does not prove successful. But his method (aggressor) or choice of methods does not engender depression because the locus of control is centralized, and in controlling others through this activity he perceives himself to some extent as in

control of his fate. Once he is arrested and placed in confinement, he can no longer perceive himself in the role of "conqueror" but in the undesirable role of "vanquished," the locus of control is shifted to a decentralized state and he perceives himself as powerless in this environment. As Durkheim has postulated (1897, 1951), the victim's acceptance of and identification with his role of aggressor is so strong that he cannot change his self-concept. Because of his perceived loss of control over others and himself in the jail situation, the depressive state he encounters is a reaction to this perceptually restrictive and oppressive environmental circumstance, and as Lyons (1972) hypothesizes, may be caused by the inhibition of aggressive responses to frustration. The situational stressors could cause him to engage in a maladaptive process that leads to suicide, much as in the ecological model of Lindemann, as studied by Gordon et al., (1950), in which he proposes that hypereridism, a morbid state of hostile aggression, exists in some individuals who, in response to repeated environmental stress and provocation from the ecological niche, turn their aggression inward. In this final act is a demonstration (more importantly to himself than to the system) that he has the ultimate control over his fate, because in taking his life he has accomplished something that the system, with all its power, could not decisively do. In his final act is his expression and demonstration of ultimate control.

The nonaggressor commits the same act, but for different reasons. He employs a life style and seeks situations where confrontation, especially of a physical or violent nature, can be avoided. His situation must offer latitude for avoiding this type of stressful situation, should it arise. He perceives his role as accommodation with as opposed to control over his fate as being accomplished through avoidance of a stressful situation. Again, as with the aggressor, his method of choice is one that precludes a depressive state. However, he may be more vulnerable to depression over his situation due to his feelings that he has no control over his fate because of strong external restraints, and is at the mercy of "the forces." Although the locus of control is decentralized, this is agreeable to him, because the external perception is clearly defined as something that must offer latitude for avoidance, and he constructs his life situation to provide the necessary avenues of escape. Rather than attempting to control his situation through confrontation and hopeful victory, he chooses not to, and attempts to avoid confrontation rather than attempt to combat it. Once arrested, and placed in jail, the situational stressors magnify for him as with the aggressor, but for different reasons. As the aggressor perceives the circumstance as a threat to his need to control, the nonaggressor perceives the situation as a threat to his need to avoid confrontation. Although the locus of control is still decentralized for

the nonaggressor, the external restraints he perceives as in control of his fate are now ill defined. Although he is confined, within that confinement are factors which serve to alter his concept of those controls. The frustrations he encounters is due to weakened external constraints (Henry and Short, 1954), in that in the jail he is left to his own resources to adapt and cope, rather than escape. There now exists the inability to avoid confronting many stressful situations, and he must bear the burden of responsibility for the frustration he encounters. The resultant stress placed on the nonaggressor is something he finds he cannot cope with. As with the aggressor (Durkheim, 1897, 1951), the nonaggressor's self concept is too strong to alter. Different from the aggressor, however, is his perception of rewards or reinforcement in life being predicated on the belief that his personal actions have nothing to do with it (Rotter, 1966). Being unable to deal with the situation, he does something that, while being antithetical to his modus operandi, is nevertheless in keeping with his character. His act of suicide, rather than being an act of defiance and attempt to control, is characteristic of his life style. Suicide is seen as his only means of avoidance of a stressful encounter.

In both cases, the decision to kill oneself is not easily reached. It is possible that this decision is the least of all alternatives but perceived as the only viable option. However, it is hypothesized (Atwood, 1972), that

the decision to commit suicide by itself lessens the severity of a depression by altering the individual's experience of his internal and external circumstances which appear as oppressive to the aggressor and inescapable for the nonaggressor. In either case, suicide can be perceived as the agent of change. In this situation, higher feelings of depression and aggression lower the feelings of fear against committing suicide (Conte, 1972). For the aggressor, the repression of aggression is seen as the precursor of self-directed aggression; for the nonaggressor, his actions are a rebellion against a life situation he can neither escape nor cope with. In both cases suicide can be the result of self-directed aggression. This is consistent with the ideas expressed by Ringel (1972) and Ohara (1974) regarding depression and self-directed aggression. The aggressor, not being able to react outward because of external controls, and the nonaggressor, unable to react outward because of internal restrictive forces, both make the only reaction they perceive as open to them, which is toward themselves. This is entirely possible when one considers that the environment in jail is replete with factors that serve to create the situation for inward aggression. Present in the individual are anger, depression and the potential for aggressive action. This can set the stage, as Mayfield and Montgomery (1972), have found, for potentially fatal injuries. Littman (1972) in his investigation of the similarities between suicidal and violent behavior, found one common

element: a sense of failure and hopelessness; a sense of being trapped with no where to turn; of being alone and isolated. Littman's study was conducted on subjects outside of the jail. One can easily imagine how being in jail could impact these feelings. It is this kind of feeling and situation that the stage for violent, destructive action is set, in some cases, against oneself.

### The Suicide Process

The victim can theoretically be termed aggressor or nonaggressor; he can be considered as manifesting inner or outer directed anger. He can be diagnosed as suffering from reactive depression, anxiety, and a plethora of other symptoms. One thing that is common to all these factors is that they all are either a precipitant, or some form of adaptive behavior to a stressful situation. Stress occurs when an individual is forced into a difficult and laborious attempt to maintain essential functions at a required level. Circumstances idiosyncratic to the particular stressful situation could force the individual to modify his behavior and activities. This involves the concept of adaptation, where an action or actions are employed by the affected party to indemnify a situation that is intolerable in its present state, and the individual will adapt his behavior to allow himself to function, cope or escape.

Ruff and Korchin (1967), describe adaptation in terms of a model of the organism as a system with inputs and outputs of energy and information. Each system tends to maintain steady states of many variables through homeostatic mechanisms. These confine within a limited range the variables which are crucial for continued existence of the system. Inputs which force the variables beyond this range are called stressors. Adjustments made to restore equilibrium constitute the process of adaptation. This involves the reorganization of certain subsystems to prevent failure of other subsystems required for survival. What is being dealt with in this study is adaptive stress behavior as defined by Ruff and Korchin (1967), but where survival is not the prime criterion for adaptation.

Personality factors can play a crucial role in defining what is stressful for a particular individual. These factors can also determine the course of action one takes in reacting to the stressful situation. With the aggressor, the essential condition for arousing anger is the blocking of goal attainment, and suicide would be a manifestation of goal attainment that is not blocked. The nonaggressor, in the same situation, might not possess the ego strength with which to withstand the psychological stress placed on him as a result of his perception of his present external environment having insufferable characteristics such as not having the means to avoid confrontation. In either character style, the synthetic function

attempted in order to reduce the stress and tension is realistically inappropriate and ineffective, and the adaptive process tends to be regressive.

Some consideration must be given to how an individual, in this case the aggressor or nonaggressor, arrives at his decision. The indications are that suicide is not necessarily an impulsive act, nor a decision easily reached; but once the decision is made, it seems an unerring course is set which will overcome almost any obstacle towards completion of the act. Suicide does not begin with the act of killing oneself. That action is the culmination of the suicide process. What precedes the final act is as significant as the act itself. It is necessary, therefore, to look at the process of suicide, the manner in which, and why the jail suicide arrives at the decision to kill himself.

Of those generic dimensions to the classification of suicidal death, only the positivity of predeath behavior applies, where it is suggested (Beck, Resnick and Lettieri, 1974), that if the individual views the behavior that could result in the termination of one's present existence as having positive potential, those aspects or factors that might ordinarily act in a manner preventive of this type of behavior assume a secondary or ineffective role. In cases such as these, it has been empirically demonstrated that suicidal persons perceive death positively and life negatively (Lettieri, 1970; Neuringer and Lettieri, 1971).

Once incarcerated, the stage upon which this scenario is to be played out is not immediately set, but the foundation of the process is begun. The onset can be more or less insidious for different victims, but the basic process is the same. After being introduced into this environment, the victim's first reaction is either anger or fear, depending on whether he is an aggressor or nonaggressor. In both cases, however, these initial emotions begin to incorporate other feelings such as anxiety, depression, frustration, and in many cases hopelessness. The potential victim finds he cannot become compatible with his surroundings, and the incompatibility is so strong as to persuade the potential victim to incept some plan to bring about a more harmonious and desirable environmental change, regardless of the scheme's irrationality. The desire to institute change becomes pervasive, eventually to the point where the individual can become oblivious to rational action, both in as he perceives his environment and affecting change. What occurs is a diminution of accurate perception, which primarily deals with the inability to differentiate internal from external. As the process becomes more acute, what transpires is innaccurate perception, which Hartmann (1939) describes as a replacement of reality with fantasy. It is at this point that the potential victim undergoes what the author has termed environmental depersonalization: a feeling of strangeness, hostility and alienation toward his circumstances and situation; a process of

derealization precipitated by the stress of an intolerable and normally inescapable environment, which can alter the ego state and affect the cognitive process in such a way as to make the individual seek reaction or escape by whatever means or extremes he perceives as available to him. In this altered state he would employ actions that could have a fatal effect on him in order to alleviate the present situation. Although his choice (death) will place him in a situation of uncircumventing permanency, and although his present predicament, no matter how lengthy, is still temporary as compared with death, he perceives neither of these situations in this reality. While the act is not necessarily impulsive, it is brought about by a distorted cognitive process as a result of impaired reality testing.

Primary is the person's perception. When perception clashes with reality, serious problems can occur. In this distorted cognitive process the victim internalizes the reality situation, and through the transposition in fantasy of this external dilemma begins to live out the conflict on an intrapsychic level. As a result, he begins to unrealistically perceive his circumstances, and responds in keeping with the unrealistic perception. While the awareness of inner states is most relevant to the sense of reality, the accurate appraisal of these is most prevalent to reality testing. Where on a realistic level he could not change his environment, in the internalized situation he now (inaccurately) perceives

himself as having the power to do so. He sees a "way out;" he realizes there is a course of action he can take to achieve the desired change of environment and he takes it. White (1963) has stated, in emphasizing the centrality of one's actions in the process of reality testing and adaptation, "Knowledge of the environment is a consequence of action." This statement sums up the intrapsychic dynamics of this particular instance of impaired reality testing. Although the knowledge is based on faulty perception, it is still a consequence of action, and as such, leads to that action.

#### Literature Review

This study has investigated the available literature on suicide in the free society as well as that on the captive suicide in order to gain further insight into this problem with regard to modifying conditions which contribute to suicide in jail. The world being studied is not the general world; it is explicitly the world of incarcerated people, where in this instance the rate of suicide is higher than in the free world. Being so, the literature review is focused solely on what is known that deals with the individual differences or factors that govern or predict who in jail commits suicide. Although there has been a pronounced paucity of literature regarding the jail suicide, in the past twenty years studies are beginning to be accumulated on the jail suicide. Stengel (1958, 1964), Danto (1971), Reiger (1971),

and Fully et al. (1965) have made significant contributions in such areas as suicide and crimes of violence, social isolation, and identified important demographic material. They did not test their speculations empirically. Their work was essentially then opinions of eminent social scientists whose content dealt with correlations between suicide and acts of violence and the act of suicide being committed by those who are socially isolated. This was probably due to the small numbers of jail suicides studied and the difficulty in obtaining clinical material. Tuckman and Youngman (1965), Shneidman (1960, 1961), Farberow (1967), and Isenstadt (1972), have offered evidence and recommendations that are well founded in the areas of suicide prevention. However, most of their research deals with the free society, and the restrictive environment of the jail does not lend itself to those methods of study found useful on the other side of the wall.

A significant work that encompassed the detention inmate was that of Fawcett and Marrs (1972), in which they examined the suicide problem in the Cook County Jail in Chicago, Illinois. They found a relationship between suicide and violent crimes. Their study was based on only 13 inmates who had committed suicide in a span of 15 months. At the other extreme, Wilkerson's Considerations of Suicidal Trauma in a Detention Facility (1972), offers little in the way of validated data, but goes into a theoretical exposition on something called "Traumatic Reception Dynamics," wherein the

trauma of being received into a jail causes one to kill himself. Were this valid, the occurrence of suicide would be far greater than it is. Fully et al. (1965), have conducted studies on the time patterns from the point of incarceration to the point of committing suicide. Beta and Claghorn (1968), have investigated factors associated with self-mutilation, narcotic addiction, and marginal occupational adjustment in the Texas Department of Correction. Danto (1971), formulated a brief profile of a jail suicide based on demographic information which suggested (but never substantiated) a relationship between violence and suicide. Esparaza (1972), had also demographically investigated attempted and committed suicides in the county jails of Michigan. Beigel and Russell (1972), conducted a similar study in Arizona and arrived at conclusions similar to those of Danto and Esparaza [supra].

Further work in this area by Toch (1970), Johnson and Britt (1969), Allen (1969), Blake (1971), Motto (1965), Pokorny (1955), Rundle (1972), and Stengel (1964) were representative of the general studies in this field in that they were largely demographic, explained characteristics of the suicidal population rather than how significant these characteristics were in relation to the nonsuicidal jail population and among different subgroups outside the jail. They also posed contradictions and differences in the different profiles, such as one profile highlighting drug addicts being significant among the suicidal population and their not being significantly

represented in another suicidal profile, although both studies utilized the same prison population. Another disagreement was whether or not patterns of violence had any significant correlation to the act of suicide. Much of the work was speculative, based on studies as they pertained to suicidal groups without comparison to the total jail population. The greater majority of work dealt with very small samples and constricted longitudinal spans.

### Hypotheses

The study was exploratory. It sought to answer a set of questions directed at the identification of characteristics of high risk inmates and or the types of situations and environmental stressors that increase the risk of suicide. Are there identifiable types of inmates who had a far greater representation among the suicidal population than their general numbers in the jail population would proportionately suggest? What was the manner in which suicide was committed and in what environmental situations? What demographic and psychological characteristics available for study distinguished suicidal persons in jail from nonsuicidal persons in jail? To the extent there were distinct demographic and psychological characteristics associated with high risk, could it be determined with some validity when, where and how people might try to kill themselves? Could these characteristics idiosyncratic to the jail suicide be reported to the resident staff so that

they might utilize this knowledge in an identification and intervention process that might be a positive deterrent to suicidal activity?

Consideration of these questions led to two main hypotheses: It is possible to define the hallmarks of suicide risk by contrasting differences in behavior between suicides and the nonsuicidal prison population. Secondly, it is possible to communicate any observed differences to the caretakers of prisoners so as to influence their perceptions of risk, and thereby reduce the probability of suicide success.

## CHAPTER II

## METHODS

The impetus for this research and the capacity to perform it devolve from the fact that from 1970 to 1973 the author served as Executive Assistant to the Commissioner of Corrections of the City of New York. In that capacity the author was charged with the task of reducing suicide rates in the prison system and had free access to any information which might facilitate this quest as well as sufficient authority to implement any findings. The general plan was to determine whether any hallmarks of prior suicide distinguished them from the general prison population and, if any were found, to communicate such factors to the custodial personnel in the hope that such knowledge might provoke selective vigilance against attempts.

Procedure

In 1971, the author gathered case histories on every prison suicide in the New York City system since 1964, the first year that compulsory record keeping commenced. The total was 54 men. Additionally, he amassed a random sample of 500, then present, male inmates and gathered the same information on them as was available for the suicide group in order to determine any factors that distinguished them from the suicides.

The number of factors was very rich since in the jail system, every inmate, without exception, must have what is known as a pedigree. This pedigree includes all pertinent demographic information such as name, address, age, date of birth, occupation, social condition, ethnicity, sex, charge, education, date of commitment and religion, as well as some administrative information. There is a file set up on each inmate, noting his case progress, his legal history as well as the results of medical and in some cases psychiatric examinations. In many cases there are probation reports which give a great deal of information on the family background and his relationship with others. There are, in some cases, reports of interviews with social workers, chaplains and sometimes observations by correction officers. If the inmate had been deemed a suicide risk, or had some behavioral problems, there would have been a special file kept on him containing psychiatric and psychological reports, observation sheets (these are called "watch" sheets, where it is recorded every half hour what the inmate is doing, etc.), progress reports as well as reports of problem behavior.

From an examination of the regularly occurring factors specified in the suicide group, an interview schedule was developed for the control group, which was administered to each member of that group in turn. Appendix 1 defines the categories of the interview protocol which was completed by the investigator after personal interviews with each inmate.

For the 54 suicides the protocol was completed from whatever documents were available; a relatively easy task for 45 of those who had received premorbid psychological evaluations, and a more difficult one for the remaining nine who had varying mixtures of premorbid documentation.

Table 1 contrasts the two groups of inmates with respect to both demographic factors and behavioral factors. In the case of the latter, the factors are listed in descending order of occurrence in the suicide group down through any factor presented by at least two cases. In the demographic factors one observes variations between the two groups--the suicides tending to be hispanic, partnered (married or common law), under-educated, under-employed and Catholic. None of these factors, however, were exclusive to the suicide and in any event were not as discriminating as many of the behavioral factors.

As seen in the table, 13 behavioral factors discriminated the two groups at the .01 level, and one at the .05 level, using the Z-test for independent proportions. The factors were not independent of one another, however, as the last column of the table makes clear. One notes that only five suicides failed to be rated as depressed, and that only three of the factors picked up these aberrant cases: current drug addiction, poor reality testing and poor impulse control. For all other factors, the suicides revealing any factor were also depressed.

To appreciate the power of these four factors, a four point scale was created, in which an inmate was assigned the sum of the factors he revealed. Table 2 presents the frequency distribution of the sum for both the suicides and control groups, wherein it is observed that the modal sum for controls was zero, while for the suicides it was two. The difference was highly significant according to a two-sample Kolmogorov-Smirnov test:  $\bar{D} = .763$ ,  $p < .001$ , (Siegal, 1956).

### Experiment

Accordingly, the author communicated his findings to the custodial staff and bade them to be watchful of prisoners revealing any of the identified suicidal hallmarks, especially at night. Additionally he arranged to gather data on any suicide attempts in the succeeding four years.

Table 1  
Incidence Rates for 54 Prison Suicides  
and 500 Control Prisoners

Demographic Factors	Suicides	S%	Control %
<b>RACE</b>			
White	20	37.0	23.4
Black	10	18.5	57.4
Hispanic	24	44.4	10.0
Oriental			2.0
Other			7.2
<b>AGE</b>			
16-20	10	18.5	23.0
21-25	23	42.6	29.0
26-30	7	13.0	20.0
31-35	3	5.6	11.0
36+	11	20.4	17.0
<b>MARITAL STATUS</b>			
Married	18	33.3	23.0
Common Law	5	9.3	3.0
Single	28	51.9	71.0
Divorced	2	3.7	2.0
Widowed			0.2
Separated	1	1.9	0.8

Table 1--Continued

Demographic Factors	Suicides	S%	Control %
EDUCATION			
Grades 1-5	17	31.5	9.0
Grades 6-9	11	20.4	18.0
High School	24	44.4	68.0
College	2	3.7	5.0
EMPLOYMENT HISTORY			
Marginal Occupational Adjustment	35	64.8	53.0
Clerical	5	9.3	6.0
Operative/Service	5	9.3	20.0
Sales/Skilled	9	16.7	21.0
RELIGION			
Catholic	40	74.1	59.0
Protestant	11	20.4	23.0
Jewish	2	3.7	1.0
Buddhist			2.0
Other			1.0
None	1	1.9	14.0

Table 1--Continued

Behavioral Factors in Descending Order of Suicidal Occurrence					
Factor	Suicides	S%	Control %	Z	SND <sup>1</sup>
Depression	49	90.7	19.2	11.35**	5
Current Charge Nonviolent	45	83.3	39.8	6.12**	0
Current Drug Addiction	31	57.4	23.4	13.37**	5
Poor Reality Testing	27	50.0	1.0	14.60**	5
First Criminal Charge	27	50.0	22.0	4.53**	0
Anxiety/Nervousness	16	29.6	7.2	5.35**	0
Bizarre Behavior	14	25.9	2.8	7.33**	0
Psychiatric History	13	24.1	1.6	8.21**	0
Poor Impulse Control	11	20.4	1.8	5.55**	4
Ideas of Reference	8	14.8	0.0	8.79**	0
Antisocial Personality	8	14.8	17.6	-0.52	0
Auditory Hallucinations	6	11.1	1.4	4.52**	0
Paranoid Thinking	5	9.3	2.2	2.95*	0
Disorientation/Confusion	4	7.4	0.2	5.32**	0
Active Psychosis	4	7.4	0.0	6.19**	0

\*  $p < .01$

\*\*  $p < .001$ , two-tailed

<sup>1</sup>SND = Suicides not showing depression

Table 2  
Behavioral Factors in Suicide Risk  
for Two Imprisoned Groups

Number of Factors <sup>1</sup>	54 Suicides (1964-1971)		500 Controls (1971)	
	N	Percent	N	Percent
0	0	0	310	62.0
1	9	16.7	155	93.0
2	28	68.5	33	99.6
3	11	88.9	2	100.0
4	6	100.0	0	100.0

<sup>1</sup> Sum of hits on current depression, current addiction, poor reality testing and poor impulse control.

## CHAPTER III

## RESULTS

In the succeeding four years (1972 through 1975) the author was apprised of 259 suicide attempts of which 31 (12%) had been successful. In addition to being provided with the pedigrees of all attempters he additionally possessed written reports of the scenarios of all attempts. It soon became apparent that the custodial staff had overreacted to the alerting training, thereby necessitating the development of criteria for the seriousness of each suicide attempt.

Accordingly, the author categorized the unsuccessful attempts according to the following criteria, in order to yield three categories of risk: a case was defined as high lethal where there was little doubt that the action taken by the attempter would have resulted in loss of life had intervention not been forthcoming, e.g., a fully dangling person having no means of self rescue having previously tied his hands between his legs to prevent himself from undoing his ligature; low lethal where there was genuine doubt that the attempter could have been successful, e.g., the mere possession of a rope; and equivocal where at the moment of discovery the need for intervention was not clear cut, e.g., a person interrupted while superficially cutting his wrist with a broken light bulb.

In the four year data base less than half of the reported unsuccessful attempters were deemed highly lethal (N = 104). Table 3 presents the frequency distributions of sums on the four behavioral measures for each of the identified groups. It is immediately observed and statistically supported, that one cannot distinguish between the first two groups nor between the second two groups. One can, however, distinguish actual suicides and high risks from the other two groups of equivocal and low risks ( $\bar{D} = .349$ ,  $p < .001$ , Kolmogorov-Smirnov test, Siegel, 1956). On the basis of these results it seems plausible to conclude that the behavioral factors governing suicide risk in the earlier sample likewise govern genuine risk in the recent sample.

To further support the relevance of the earlier findings to the new data base, it is observed that despite the heightened alertness to suicide among the custodians, a greater proportion of successes occurred by night (midnight to 8:00 A.M.) than by day: of the actual successes, 13 occurred during the eight hour night shift and 18 during the 16 hour day and evening shifts. Stated another way, actual suicides represent 54% of the night attempts and only eight percent of the non-night attempts.

Finally, the risk associated with age was clarified in the four year sample, as shown in Table 4, where for purposes of comparison the data for the actual and high lethals are contrasted with the equivocal and low lethals as a function

Table 3

Behavioral Factors in Suicide Risk for Four Risk Types (1972-1975)

Number of Factors <sup>1</sup>	Actual Suicide		High Lethal		Equivocal Lethal		Low Lethal	
	N	%	N	%	N	%	N	%
0	9	29.0	13	12.5	12	66.7	49	46.2
1	11	35.5	44	54.8	4	88.9	49	92.4
2	6	19.4	46	99.0	2	100.0	8	100.0
3	5	16.1	0	99.0	0	100.0	0	100.0
4	0	100.0	1	100.0	0	100.0	0	100.0

<sup>1</sup> Sum of hits on current depressions, current addiction, poor reality testing and poor impulse control.

Table 4  
Distribution of Suicide Attempts by Age

Age Range (Years)	Actual and High Lethal (N = 135)		Equivocal and Low Lethal (N = 124)	
	N	Percent	N	Percent
16-20	16	11.9	59	47.6
21-25	52	38.5	34	27.4
26-30	32	23.7	17	13.7
31-35	16	11.9	9	7.3
36+	19	14.1	5	4.0

of age. We observe that the modal serious attempter is five years older than the modal non-serious attempter. Indeed, the offset is highly significant ( $\bar{D} = .357$ ,  $p < .001$ , Kolmogorov-Smirnov test, Siegal, 1956), thus adding a further potential factor in predicting suicide risk.

## CHAPTER IV

## DISCUSSION

The New York City Department of Correction, after being presented with the study, commenced a pilot program utilizing the findings of this study as a basis for an identification-intervention process. The department advertised for correction officers who were interested in working in the areas of mental health. The objective was to train these officers to be extensions of the mental health staff in an attempt to establish a therapeutic milieu in which ongoing observation and intervention could be accomplished. Officers who expressed an interest were interviewed and their backgrounds were examined to see if they had any formal education, training or experience in working with the mentally handicapped, particularly the suicidal individual.

Once selected, these officers were given special training by the mental health staff in what to observe regarding the potentially suicidal inmate, based on what had been indicated by the study. They were also given special training in intervention techniques as well as training in rescue and resuscitation methods. Although the department could staff the Mental Health Facility on Rikers Island from this cadre, there were not enough uniformed personnel to create a similar cadre to work in this capacity in the various facilities selected for the pilot program. What was incepted was a

plan to augment this staff by utilizing carefully screened and specially trained inmates to assist the mental health staff and officers during the off-hours when mental health staff were usually unavailable and there was reduced security staff on duty. The necessity of carefully chosen inmates becomes immediately apparent. As noted earlier in this study, the first consideration of any jail or prison is security, so the inmate in this program could not be a security risk. Second, but of equal importance, the inmate had to have an interest in working with suicidal people. Just as with the officer candidates, their backgrounds were examined for education, experience and training. They were psychologically examined, in the same fashion as were the nonsuicidal sample, to determine their mental stability. They were then contracted for the highest rate of pay that could be given to an inmate and transported to the Rikers Island Mental Health Facility where they could also receive the specialized training from the trained officers in the observation, intervention and rescue techniques.

The objective was to assign a group of Suicide Prevention Aides (SPAs), as the inmates were called, to a trained officer-supervisor who would supervise their activities on each tour of duty they worked. One unanticipated offshoot of the program that proved to be effective was the empathy the SPA had for his fellow (suicidal) inmate, and would spend much of their time talking and listening to the inmate and acting as a

cathartic agent where the suicidal inmate might verbalize rather than aggress inward. We found over a period of time that some attempt activity began to diminish along with successful suicidal activity. The identification-intervention program displayed the potential for being effective, especially at night, when suicidal activity was highest.

### Main Findings

The findings of this study support the original hypotheses that it is possible to define the hallmarks of suicide risk, and it is further possible to communicate these factors to the caretakers of prisoners and thereby reduce the probability of successful suicide attempts. In considering what has been contributed by this study, the most cogent benefit is that it saves lives. What has been developed is a viable mechanism by which the suicidal person can be indicated without the disadvantage of having to investigate factors and data that may not have relevance. While there was much data available for study, as noted in the Methods section of this paper, a system was developed that indicated those factors that were significantly germane to those people who engaged in highly lethal suicidal activity. The implications of such an identifying mechanism hold distinctive import for saving lives that transcend the jail population. While it is true the jail population was studied and factors endemic to that population were utilized to diminish successful suicides, the process

may be applicable to any type of institution or agency that has a suicidal problem.

A closer look at the particular inmate variables of significance suggests that in regard to suicide, the victims in the captive society may be a microcosm of their counterpart in the free world. Depression was noted as a strong factor regarding the jail suicide, and it is no different in the free society. The literature is replete with studies showing the relationship between suicide and depression (Mayer, 1971; Mayfield and Montgomery, 1972; Cooper, 1974; Atwood, 1972; Lyons, 1972, Cline, 1973; Fawcett, 1974; Lester and Beck, 1975; Korella, 1972). What was common to the victims in these studies and to the jail suicide was depression brought on by social isolation, particularly isolation from significant others. The jail suicide was typical of the free society in that the depression symptoms were due to the loss of a significant other either through death (not caused by the inmate in the greater majority of cases), divorce, other types of romance dissolution or family separation, and also what was not indicative of the free society, separation resulting from incarceration. While there is not substantial literature to document it, anyone who has had contact with jails or prisons is aware of their potential for creating depression. Beyond the separation factor are other exacerbating aspects which cause depression. The introduction into the sometimes alien, always hostile atmosphere which characterizes the prison world

is of itself depressing. The invasion of personal space, the loss of privacy, the repression of strict regimentation and limited movement, and the forced anonymity through the exclusion of those things such as personal clothing and accessories, pastimes and other amenities that we often take for granted, but serve to make us distinct as individuals leaves little for the incarcerated person to feel elated about.

Depression is not easily dealt with, particularly in a reinforcing environment. There are those who cannot cope with it and seek to escape. Traditional escape, freedom from physical incarceration, is not what is being discussed. The person theoretically classified as the nonaggressor, not being able to confront, but neither being able to cope, could in this state view suicide as a viable alternative. Many incarcerated people feel they are failures, and develop pessimistic outlooks which can lead to negative attitudes and feelings of unworthiness. Many of the suicide notes examined by the author reflected these feelings. This finding is strikingly similar to the findings of Beck, et al., (1973), where they found suicidal patients who were hospitalized had suicidal wishes which correlated highly with cognitive factors such as pessimism and a sense of failure. Similar findings were noted in investigations by Oshiba (1974), Rudy (1974), Barraclough, et al. (1974), Lester and Beck (1975) and Leonard (1974).

It was also indicated that as a group, the high lethal attempter had better-constructed plans on how to accomplish

suicide than did the low lethality attempter. He expressed more anger and appeared in a more pronounced state of depression generally than did his low lethality counterpart. Although it is extremely difficult (if indeed at all possible) to truly determine intent, indications are that the behavior of the high lethality attempt groups exhibited a stronger determination to harm themselves in a manner that was more syntonic with those attitudes indigenous to a suicidal person than the behavior of the low lethality group which, for the most part, indicated motives other than self destruction, such as manipulation, attention seeking and other secondary gain.

Poor reality testing and poor impulse control are consistent with the author's theoretical explanation of the suicide process. Poor reality testing is part of the adaptive function. Actions are taken by a victim to indemnify a situation he perceives as intolerable but inescapable. If the need to escape is unrelenting and rational thought provides no solution, parataxic and impaired teleological thought processes could conceivably substitute for rational cognitive functioning indicative of that found in psychotic processes. Within the framework of the logic of this type of adaptive stress behavior, suicide could be a preference. Similar situations were found to exist in the free society (Beck, et al., 1974), where if the individual views suicide as terminating an existence he cannot otherwise escape, those preventive mechanisms ordinarily in force become ineffective. In this

situation, the suicidal person perceives death as having more positive qualities than life (Lettieri, 1970; Neuringer and Lettieri, 1971).

Poor impulse control is not only endemic to the psychotic personality. It is also characteristic of the sociopath, that personality most often found in the jails and prisons. It is logical to assume that if poor impulse control plays so important a role in the life and character style of the psychopath (McCord, 1956; Hetherington, 1971), it should also be contributory to the suicidal process of those psychopaths who become suicidal or display suicidal activity. The psychopath's life style is predicated upon acting out without logically considering the consequences of his actions, nor does he learn from past experience (Leaff, 1978), and so it is with the suicidal psychopath. The poor impulse control he displays in his act to end his life is characteristic of the poor impulse control displayed in other aspects of his life, it is simply another manifestation of character-consistent behavior.

The relationship between addiction and suicidal activity, while documented in the free society (Conte and Plutchik, 1974), seems to be more prevalent in jail (Litman, et al., 1972). The statistical evidence of the findings of this study buttress the opinions of the author regarding the association of addiction and suicidal activity. Suicidal activity was particularly noted during the initial phase of the addict's

incarceration when he began to experience narcotic withdrawal. This was particularly true prior to a methadone detoxification program implemented in the New York City Department of Correction in 1971. Before the detoxification program, the addict underwent what was commonly referred to as "cold turkey," withdrawal with little or no medicinal assistance. Bussi (1972), in his studies also noted that interruption of the drug habit during withdrawal in the free society can lead to depression which in turn can lead to suicide.

Having an addict survive withdrawal without medicinal supports did not mitigate against further suicidal activity. Quite often an addict would attempt or commit suicide in jail even before or after experiencing withdrawal, as if being in jail itself prompted this activity in the addict. Incarceration is more emotionally detrimental to the drug addict than the nonaddict, at least this was so prior to the implementation of the detoxification program. In addition to all the standard deprivations (e.g., loss of freedom, separation from significant others, etc.) the addict's drug supply was cut off. This, to the addict, was the most intolerable of circumstances and the prospect of either going through "cold turkey" or, having survived withdrawal, not having access to his drug supply often made the addict perceive life as not worth living. Friedman, et al. (1973), in their studies of incarcerated addicts noted the jail as contributing to the etiology of suicidal behavior in addicts. They found that 37%

of the covert suicide attempts among the studied group were related to incarceration.

An interesting phenomenon related to the addict and suicide was the inception of a methadone detoxification program in the jails that in addition to relatively painless detoxification and withdrawal, offered emotional support systems beyond withdrawal. Suicidal activity among drug addicts decreased to the point that no addict in the detoxification program committed suicide during the four years the author was associated with the program. What was perplexing was that the overall suicidal activity for the department remained relatively constant and showed no significant decrease. By coincidence, the methadone detoxification program, incepted in 1971, was concurrent with the phenomenon of less drugs being on the streets of the city as a result of Turkey and other heroin producing countries agreeing to significant cutbacks in their poppy (opium flower) fields. What transpired was a diminution in the number of heroin addicts but a heightened competition for a scarce heroin market among the remaining addicts. The jails experienced more of the reduced number of addicts being arrested because many of them had to commit more crimes to meet the inflated fiscal demands of a smaller heroin market, thereby increasing their probability of detection and apprehension. Those who were former addicts and no longer addicted were being arrested as a result of committing crimes for other reasons, e.g.,

alcohol related crimes. The support services offered the addict through the detoxification program proved significant in diminishing suicidal activity among the addicted population, but the department saw an increase in suicidal activity among the nonaddicted suicidal population. It was concluded that although these support services were provided the addict, they were provided for the wrong reasons, which could very well, in part, have been responsible for the greater number of suicides occurring among nonaddicts. This attention was directed toward the addict because he was an addict, and not toward the psychodynamics of which the addiction was symptomatic. These dynamics were also found among those who did not or no longer used drugs, but were privy to the same psychological stressors the drug addict was subject to. The extension of these support services to those nonaddicts who might somehow manifest the need could be considered crucial to the diminution of self destructive behavior among the nonaddict population. The support services were made a component of the suicide prevention program that was implemented the following year.

The age characteristic of the suicidal victim in jail was consistent with that of the victim in the free society. It was indicated that the older inmate was more prone to serious suicidal activity than was the younger inmate (Smith and Davison, 1971; Weismann, et al., 1973; Stevenson, et al., 1972). The older person in the free society is also more

prone to suicide (Rieger, 1971; Bocker, 1973). The difference in the free and captive societies in this regard is the suicidal inmate is younger than his suicidal counterpart in the free world. However, the general jail population is younger than that of the free society, so the activity is consistent in regard to the age characteristic.

What is apparent is a set of four variables, the three psychological variables of depression, poor reality testing and poor impulse control, the demographic variable of addiction, plus the additional variable of age as a qualifier. They comprise the basis for an algorithm that not only indicates who in a jail population might be at high risk, but also affords staff a viable modality with which to identify the suicidal person. What is of special significance is that the individual need not display all the variables. Any one or combination is sufficient to give notice to staff that they should be alert to the possibility of suicidal potential. What is clearly demonstrated is the more variables noted the higher the risk potential.

The results established the nondiscriminability of actual suicides from high lethal attempters as well as the high discriminability of both groups from equivocals and low lethals. For all practical purposes then, there are two groups to consider in assessing the benefits of the four factor scale as a basis for suicide monitoring: the successful if not interrupted versus the attention-getters. Table 5

recasts the data of Table 3 in signal detection terms where the attention-getters are considered false alarms in contrast to the successful-if-not-interrupted who are considered signals. Table 5 indicates the discriminability afforded by each step of the four factor scale as a basis for assessing benefits and drawbacks of differing vigilance algorithms using the standard  $d'$  metric (Green and Swets, 1966). We observe that the mathematically most efficient point on the scale exactly corresponds to the point of appropriate humanitarian intervention, namely, a single hit. At that value, 84% of the genuine risks are identified at the price of noticing 51% of the attention-getters.

Who to watch will depend on a number of factors, such as manpower, resources, facilities, budget, etc., and are decisions to be made by the departments of correction. However, the modality which has the greatest potential for success is that where any and all of the four variables are noted and further qualified by employing the age variable. In other words, be alert to anyone who displays any one of the four variables. To the extent they display more than one variable be even more alert. If they display all the variables be exceptionally alert. If one, several or all of the variables are noted and the person is further qualified by age (over 20 years old), be extremely alert.

Table 5  
Discriminability of Four Factor Scale

Number of Factors <sup>1</sup>	False Alarms (Equivocals and Low Lethals) N=124		Signals (Actual Suicides and High Lethals) N=135		d'
	N	Cumulative Pct.	N	Cumulative Pct.	
0	61	49.2	22	16.3	0.92
1	53	91.9	55	57.0	1.22
2	10	100.0	52	95.6	.68
3	0	100.0	5	99.3	.27
4	0	100.0	1	100.0	0
Total	124		135		

<sup>1</sup>Sum of hits on current depression, current addiction, poor reality testing and poor impulse control.

### Implications for Further Research

While it is true that the formulation and inception of the Suicide Prevention Program, based on this study, has had significant positive impact on the suicide problem in the New York City Department of Correction, it can by no means be assumed that all aspects of the suicide problem in jails and prisons will be totally impacted by the highlighting of the most important psychological variables. It is the opinion of the author, and there are indications in the data to suggest that a further investigation of the demographic variables might reveal certain factors that could not only buttress the psychological factors significant to the identification process, but might contribute to the timeliness of the identification process.

As the reader obviously noted, there were some suicides even after the program was operational. These suicides fell into two categories: suicides occurring in facilities where the pilot program was not in effect, and those suicides who killed themselves before the system had an opportunity to attempt to identify and intervene. This at least indicates that length of stay could be more than just incidental to suicidal activity. Could introduction into the jail system augment the suicide process for some people? This is an area that requires further research as it may hold the potential for speedier identification.

Other areas of interest generated by this study are the implied association between successful suicide and non-violent criminal activity and also the higher rate of suicide among those who have had no prior association with jails. Suicide is self-murder, and any act of murder is an act of violence. Why would an individual who demonstrates a non-violent style commit so violent an act? While the author has hypothesized this phenomenon earlier in this study, further research is needed in order to determine if this could contribute to the identification of the suicidal inmate. Another curiosity is the suicide who has not been in jail before. Is the trauma of coming to jail for the first time so distinct, as is assumed by many social scientists, as to constitute a separable contributory factor? Both of these variables should be explored in further research.

It can be seen then, that although the study has demonstrated some measure of success, it is not without its limitations. Although less people are dying, some people are still dying, and perhaps the severest limitation of this study is that it is not yet saving more people. It is this limitation that so cogently demonstrates the need for further research. But whatever the limitations, it can be seen that what has been demonstrated is a practical modality for saving lives by a process that can be utilized in institutions and agencies other than jails. It holds pragmatic implication for

parsimonious identification of the suicidal person so that life saving intervention can be attempted.





## Appendix 1--Continued

DEMOGRAPHIC PROFILE: SUICIDE CASE NO. \_\_\_\_\_

HOLIDAY OR COMMEMORATIVE DAY Yes       NoTIME\_\_\_\_\_  A.M.       P.M.  
HourSEASON Summer       Fall       Winter       Spring

## Appendix 1--Continued

PSYCHOLOGICAL PROFILE: SUICIDE CASE NO. \_\_\_\_\_

DEPRESSION

Reactive       Endogenous       None       Severe  
 Moderate       Light

PRIOR SUICIDE ATTEMPTS

Multiple       Singular       None

ANXIETY/NERVOUSNESS

Acute       Mild       None

SUICIDAL IDEATION

Well defined       Undefined       None

BIZARRE/UNUSUAL BEHAVIOR

Pronounced       Mild       None

HALLUCINATIONS

Auditory       Visual       Others       None

IMPULSE DISORDER

Pronounced       Moderate       Mild       None

CONFUSION

Profound       Moderate       Mild       None

PSYCHIATRIC HISTORY

Yes       No

## Appendix 1--Continued

PSYCHOLOGICAL PROFILE: SUICIDE CASE NO. \_\_\_\_\_

PARANOID THINKING Yes       NoPOOR REALITY TESTING Yes       NoIDEAS OF REFERENCE Yes       NoPSYCHOSIS Yes       NoSCHIZOPHRENIA (other than psychosis) Yes       NoPOOR IMPULSE CONTROL Yes       NoANTISOCIAL PERSONALITY Yes       No

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